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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,704	10/08/2007	Fraser Shaw	FRYHP0142US	5046
23908 7590 07/19/2010 RENNER OTTO BOISSELLE & SKLAR, LLP 1621 EUCLID AVENUE NINETEENTH FLOOR CLEVELAND, OH 44115				
EXAMINER				
YAN, REN LUO				
ART UNIT		PAPER NUMBER		
2854				
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07/19/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/595,704

**Applicant(s)**

SHAW ET AL.

**Examiner**

Ren L. Yan

**Art Unit**

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 May 2010.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41 is/are pending in the application.  
4a) Of the above claim(s) 35-37 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-34 and 38-41 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 05 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB/06)  
Paper No(s)/Mail Date See Continuation Sheet  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

Continuation of Attachment(s) 3. Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :5/5/2006,8/17/2006,6/3/2009,6/17/2009.

### **DETAILED ACTION**

Applicant's election of invention Group I, claims 1-34 and 38-41 in the reply filed on 5-13-2010 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The specification is objected to because it does not provide subtitles for the various section it contains.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 11, 13-19, 27-31, 34, 39 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Podlipec et al(6,038,969).

Regarding claim 1, Podlipec et al teach the structure of a frame unit for tensioning a printing screen as claimed, the frame unit comprising a frame 1 including at least one frame member 2, the at least one frame member comprising: a supporting frame element; at least one engagement element 11 and 12 for engaging a fitted printing screen 9 to tension the same, wherein the at least one engagement element comprises a body 5 which is pivotally coupled to the supporting frame element such that the at least one engagement element is pivotable in one, tensioning sense to tension a fitted printing screen (the dotted position of engagement element body 5 in Fig. 2) and the other, opposite sense to adopt a configuration in which a printing screen can be fitted to or removed from the frame unit (the normal and unbiased position of engagement element body 5 in Fig. 2), a first, engagement arm 11 (the upper part of engagement element body 5) extending from the body for engaging a fitted printing screen, and a second, biasing arm(the part of the engagement element body 5 that is biased by the tensioning tube 4) extending from the body to which a biasing force is applied to bias the at least one engagement element to pivot in the tensioning sense; and at least one biasing element 4 (the tension tube) operative to apply a biasing force to the biasing arm of the at least one engagement element to bias the at

least one engagement element to pivot in the tensioning sense and tension a fitted printing screen. See Figs. 1-7 and column 4, line 19 through column 5, line 40 in Podlipec et al for details.

Regarding claim 2, Podlipec et al teach wherein the supporting frame element comprises an extruded section 3.

Regarding claim 3, Podlipec et al teach wherein the at least one engagement element comprises an extruded section.

Regarding claim 4, Podlipec et al teach wherein the supporting frame element includes a cavity along a length thereof in which the at least one engagement element is disposed.

Regarding claim 5, Podlipec et al teach wherein the supporting frame element includes a recess in a surface thereof into which the at least one engagement element 11 and 12 extends for receiving an engagement member at a respective edge of a fitted printing screen.

Regarding claim 11, Podlipec et al teach wherein the at least one frame member comprises: a plurality of engagement elements 11 disposed along a length of the supporting frame element.

Regarding claim 13, Podlipec et al teach wherein the engagement elements 11 are juxtaposed in end-to-end relation along a length of the supporting frame element.

Regarding claim 14, Podlipec et al teach wherein the frame includes a mounting surface by which the frame unit is mounted to a screen printing machine. The Examiner notes that the recited mounting surface reads on the left vertical outer surface and the bottom horizontal surface of the frame member 2 as shown in Fig. 2 of Podlipec et al.

Regarding claims 15 and 39, Podlipec et al teach wherein the at least one biasing element

4 is configured to apply a biasing force to the biasing arm of the at least one engagement element in a direction substantially orthogonal to the mounting surface.

Regarding claim 16, Podlipec et al teach wherein the engagement arm of the at least one engagement element extends substantially orthogonally to the mounting surface.

Regarding claims 17 and 40, Podlipec et al teach wherein the biasing arm of the at least one engagement element has a principal component extending parallel to the mounting surface.

Regarding claim 18, Podlipec et al teach wherein the biasing arm 11 of the at least one engagement element extends in a direction towards an outer edge of the supporting frame element.

Regarding claim 19, Podlipec et al teach wherein the supporting frame element includes at least one aperture into which at least one engagement member (the side edge of the screen 9) can be inserted to engage the biasing arm of the at least one engagement element to pivot the at least one engagement element in the other sense to adopt a configuration in which a printing screen can be fitted to or removed from the frame unit.

Regarding claim 27, Podlipec et al teach wherein the at least one frame member 2 comprises an elongate member.

Regarding claim 28, Podlipec et al teach wherein the frame is substantially rectangular in shape.

Regarding claim 29, Podlipec et al teach wherein the frame includes a plurality of frame members.

Regarding claim 30, Podlipec et al teach wherein the frame includes at least one pair of frame members disposed in opposed relation.

Regarding claim 31, Podlipec et al teach wherein the frame comprises first and second pairs of frame members each disposed in opposed relation.

Regarding claim 34, Podlipec et al teach the combination of the frame unit of claim 1 and a printing screen.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 7 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Podlipec et al in view of Hillstrom et al (4,580,361).

Regarding claims 6 and 38, Podlipec et al teach all that is claimed including the engagement element being pivotally supported to tension the screen mounted on the support frame. However, Podlipec et al do not teach that the supporting frame element includes one of a pivot projection or a pivot recess extending along a length thereof and the at least one engagement element includes the other of a pivot recess or a pivot projection extending along a length thereof which engages the one of the pivot projection or the pivot recess of the supporting frame element.

Hillstrom et al teach the conventional use of a pivot projection 34 disposed on one element to be engaged with a pivot recess on the pivoting element 30 so as to facilitate the pivotal movement of the pivoting element 30 as shown in Figs. 6 and 7.



One of ordinary skill in the art would have recognized that the pivoting projection and recess as taught by Hillstrom et al are mechanically equivalent to the pivoting structure of the engagement element body 5 in Podlipec et al so as to allow one element to pivot relative to the other.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the engagement element pivoting structure of Podlipec et al with the pivoting projection and the recess appropriately disposed as taught by Hillstrom et al as a simple substitution of one known mechanical pivoting structure for another so as to predictably achieve the same pivoting movement for the engagement element during the screen tensioning operation.

Regarding claim 7, Podlipec et al, as modified teach wherein the one of the pivot projection or the pivot recess of the supporting frame element and the other of the pivot recess or the pivot projection of the at least one engagement element are captively engaged.

Claims 8-10, 12, 20-23, 33 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Podlipec et al in view of Williams (6,289,804).

Regarding claims 8, 9 and 41, Podlipec et al teach all that is claimed except for the biasing element providing a permanent biasing force and being a resilient element.

Williams teaches in a similar frame unit for tensioning a printing screen the conventional use of a biasing element in a form of a coil spring 9 that is resilient and provides a permanent biasing force to tension the printing screen 10 mounted thereon. See Fig. 2 in Williams for example.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the frame unit of Podlipec et al with the coil spring as the biasing element as taught by

Williams so as to predictably tension the printing screen with a constant biasing force.

Regarding claim 10, Podlipec et al, as modified by Williams teach wherein the at least one frame member comprises: a plurality of biasing elements (spaced apart coil springs 9 for each frame element 3 shown in fig. 8 of Williams) for biasing the at least one engagement element.

Regarding claim 12, Podlipec et al, as modified by Williams teach (Fig. 8 of Williams) wherein the at least one frame member comprises: a plurality of biasing elements for biasing the engagement elements, wherein each engagement element is biased by at least one biasing element.

Regarding claim 20, Podlipec et al teach all that is claimed except for the at least one frame member further comprises: a counter-biasing element operative to apply a counter-biasing force to the at least one engagement element to overcome the biasing force of the at least one biasing element and pivot the at least one engagement element in the other sense to adopt a configuration in which a printing screen can be fitted to or removed from the frame unit.

Williams teaches in a similar frame unit for tensioning a printing screen the use of a counter-biasing element 20 operative to apply a counter-biasing force to the at least one engagement element 4 to overcome the biasing force of the at least one biasing element 9 and move the at least one engagement element 4 in the other sense to adopt a configuration in which a printing screen can be fitted to or removed from the frame unit.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the frame unit of Podlipec et al with the coil spring as the biasing element as taught by Williams so as to predictably tension the printing screen with a constant biasing force and the

counter-biasing element to overcome the biasing force of the biasing element to pivot the at least one engagement element in the opposite direction so as to more effectively facilitate the mounting and removal of the printing screen from the frame unit.

Regarding claim 21, Williams teaches wherein the at least one counter-biasing element 20 comprises an expandable member.

Regarding claim 22, Williams teaches wherein the at least one counter-biasing element 20 comprises an inflatable bladder.

Regarding claim 23, Podlipec et al, as modified by Williams teach wherein the at least one counter-biasing element is configured to apply a counter-biasing force to a side of the biasing arm of the at least one engagement element opposite to which the biasing force is applied by the at least one biasing element.

Regarding claim 33, Podlipec et al, as modified by Williams teach wherein each frame member further comprises: a single counter-biasing element operative to apply a counter-biasing force to the at least one engagement element to overcome the biasing force of the at least one biasing element and pivot the at least one engagement element in the other sense to adopt a configuration in which a printing screen can be fitted to or removed from the frame unit.

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Podlipec et al in view of Salisbury (6,588,334).

Regarding claim 32, Podlipec et al teach all that is claimed except for the use of corner pieces that connect the frame member to form a frame.

Salisbury teaches a screen printing frame 104 wherein respective ends of the frame members 103 are connected by corner pieces 101. See Figs. 1 and 2 in Salisbury for example.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the frame unit of Podlipec et al with the frame members connected by corner pieces as taught by Salisbury so as to facilitate the assembly and disassembly of the frame.

Claims 24-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement indicating allowable subject matter:

Regarding claim 24, no prior art has been found to teach the overall combination structure of a frame unit for tensioning a printing screen as claimed including particularly the at least one engagement element further comprises a third, operating arm to which a counter-biasing force is applied by the at least one counter-biasing element to overcome the biasing force of the at least one biasing element and pivot the at least one engagement element in the other sense to adopt a configuration in which a printing screen can be fitted to or removed from the frame unit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ren L. Yan whose telephone number is 571-272-2173. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ren L Yan/  
Primary Examiner, Art Unit 2854  
July 15, 2010